

Application No. 10/640,553  
Amendment dated October 23, 2008  
Reply to Office Action of October 2, 2008

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**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) Method A method for making a negative hearing aid mold, comprising:

taking an impression of the auditory canal;

measuring the outside dimensions of the impression to generate outside auditory canal measurement data;

processing auditory canal dimension measurement data representing dimensions of an auditory canal to generate outside auditory canal dimension data that represents outside dimensions of the auditory canal;

processing the outside auditory canal dimension data to generate outside mold data; and

creating a negative hearing aid mold from the mold data, having an inside surface with dimensions the same as the outside dimensions of the auditory canal, with the negative hearing aid mold being suitable for receipt of a soft solid.

2. (Cancelled)

3. (Currently Amended) The method of claim 1 2, wherein ~~with~~ measuring the outside dimensions of the impression of an auditory canal includes ~~comprising~~ measuring the outside dimensions of the impression of the auditory canal with a laser to generate laser measured auditory canal data.

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4. (Currently Amended) The method of claim 3 wherein ~~with~~ measuring the outside dimensions of the impression of an auditory canal includes ~~comprising~~:  
    ~~measuring the outside dimensions of the impression of the auditory canal~~  
    ~~with a laser to generate laser measured auditory canal data; and~~  
    generating point cloud/STL data from the laser measured auditory canal data.
5. (Currently Amended) The method of claim 2, further comprising:  
    analyzing the impression to generate auditory canal point cloud/STL data;  
    and  
    using a laser to measure a plurality of surface positions on the impression to generate the auditory canal point cloud/STL data.
6. (Currently Amended) The method of claim 1, wherein ~~with~~ processing the outside auditory canal dimension data to generate outside mold data includes ~~comprising~~ generating point cloud/STL data.
7. (Currently Amended) The method of claim 6, further comprising generating stereo lithography data from the point cloud/STL data.
8. (Currently Amended) The method of claim 1, wherein ~~with~~ creating the negative hearing aid mold includes ~~comprising~~ creating a negative hearing aid mold from the outside mold data using stereo lithographic techniques, ~~with the negative hearing aid mold~~ being suitable for use as an outside mold for the construction of a soft solid hearing aid.
9. (Currently Amended) The method of claim 1, wherein ~~with~~ creating the negative hearing aid mold includes ~~comprising~~ making an epoxy based hearing aid mold from the outside mold data using rapid prototyping ~~such as~~ stereo lithography.

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10. (Currently Amended) The method of claim 9 ~~1~~, wherein ~~with the creating the negative hearing aid mold comprising making an epoxy based hearing aid mold from the outside mold data using rapid prototyping such as stereo lithography includes using with SLA Epoxy Resin Si-10.~~

11. (Currently Amended) The method of claim 1, wherein ~~with the creating the negative hearing aid mold~~ includes ~~comprising~~ making an medical grade acrylonitrile butadiene styrene ABS based hearing aid mold from the outside mold data using rapid prototyping ~~such as~~ fused deposition modeling.

12. (Currently Amended) The method of claim 1, wherein ~~with the creating the negative hearing aid mold~~ includes ~~comprising~~ making an powdered nylon hearing aid mold from the outside mold data using rapid prototyping ~~such as~~ laser sintering.

13. (Currently Amended) The method of claim 1, wherein ~~with the creating the negative hearing aid mold~~ includes ~~comprising~~ making an powdered nylon hearing aid mold from the outside mold data using rapid prototyping ~~such as~~ Digital light processing.

14. (Currently Amended) The method of claim 1, wherein ~~with the creating the negative hearing aid mold~~ includes ~~comprising~~ making an epoxy based hearing aid mold from the outside mold data using rapid prototyping such as stereo lithography with epoxy resin.

15. (Currently Amended) The method of claim 1, further comprising:  
mounting the negative hearing aid mold on a faceplate; and  
placing a soft solid in the negative hearing aid mold.

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16. (Currently Amended) The method of claim 15, further comprising installing hearing aid electronics and transducers on the face plate before the negative hearing aid mold is mounted on the faceplate.
17. (Currently Amended) The method of claim 15, ~~wherein with~~ placing the soft solid in the negative hearing aid mold includes ~~comprising~~ placing silicone in the negative hearing aid mold.
18. (Currently Amended) The method of claim 1, further comprising installing hearing aid transducers and electronics in the negative hearing aid mold.
19. (Currently Amended) The method of claim 1, ~~wherein with~~ processing the auditory canal dimension measurement data includes ~~comprising~~ processing with a computer processor the auditory canal dimension measurement data representing dimensions of the auditory canal to generate the outside auditory canal dimension data.
20. (Currently Amended) The method of claim 1, ~~wherein with~~ processing the outside auditory canal dimension data includes ~~comprises~~ processing with a computer processor the outside auditory canal dimension data to generate outside mold data.
21. (Currently Amended) ~~The method~~ Method of claim 1, further comprising:  
measuring auditory canal dimension measurement data representing dimensions of an auditory canal directly from the auditory canal by inner ear scanning using optical or magnetic resonance imaging to generate outside auditory canal dimension data that represents outside dimensions of the auditory canal; and transmitting the measurement data.
22. (Cancelled)

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23. (Currently Amended) The method ~~Method~~ of claim 1, wherein ~~with~~ creating a negative hearing aid mold from the outside mold data using rapid prototyping includes ~~further comprises~~ creating the negative hearing aid mold from the outside mold data using fused deposition modeling.

24. (Currently Amended) The method ~~Method~~ of claim 1, wherein ~~with~~ creating a negative hearing aid mold from the outside mold data using rapid prototyping includes ~~further comprises~~ creating the negative hearing aid mold from the outside mold data using Digital light processing.

25. (Currently Amended) The method ~~Method~~ of claim 1, wherein ~~with~~ creating a negative hearing aid mold from the outside mold data using rapid prototyping includes ~~further comprises~~ creating the negative hearing aid mold from the outside mold data using laser sintering.

26. (Currently Amended) A method for making a negative hearing aid mold, comprising the steps of:

taking an impression of an auditory canal;

measuring the outside dimensions of the impression to generate outside auditory canal measurement data;

processing laser measured auditory canal dimension measurement data representing dimensions of an the auditory canal to generate outside auditory canal dimension data that represents outside dimensions of the auditory canal, with the laser measured auditory canal dimension measurement data obtained with a laser measurement system;

processing the outside auditory canal dimension data to generate outside mold data; and

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creating a negative hearing aid mold from mold data, having an inside surface with dimensions the same as the outside dimensions of the auditory canal, with the negative hearing aid mold suitable for receipt of a soft solid.

27. . (New) A method for making a negative hearing aid mold, comprising:
- scanning an inner ear directly, using optical or magnetic resonance imaging, to obtain auditory canal dimension measurement data;
  - transmitting the auditory canal dimension measurement data to a stereo lithography machine for mold production; and
  - producing a negative hearing aid mold using stereo lithography, wherein the negative hearing aid mold has an inside surface dimension corresponding to the auditory canal dimension measurement data.